NET VOLUME CHANGE

The net volume change analysis was performed for each timber type at the subplot level by comparing the current data for individual subplots with data from previous measurements. Net volume change is calculated by subtracting the subplots initial net volume from the final net volume and adding in any volume harvested. Subplot level changes were used to calculate the annual weighted net change per acre for each sawtimber type. These were then accumulated to provide a weighted average annual net volume change per sawtimbered acre (Table 6).

The Area's total annual net volume change provides a benchmark in determining the annual harvest level. Overall, the over-mature, large sawtimber stands have a higher per acre net annual change than the small sawtimber stands. This is due to the large sawtimber, low stocked, seed tree stands, timber type 11, having double the growth rates of the second growth, low stocked, seed tree stands, timber type 21. Almost all of the CFI plots in timber type 11 have been logged since the last inventory, and their annual net volume change is influence by the harvested volume. CFI plots in timber type 21 were logged prior to the last inventory and exhibit the lower growth rates associated with seed tree stands. Over-mature, medium and highly stocked sawtimber stands do not have the higher net growth rates that the younger second growth stands exhibit (Appendix F). The Southwestern Idaho Supervisory Area has approximately 84 percent of their sawtimber acreage under management. The current calculation of annual net volume change may closely represent the Area's potential growth.

We believe the term "annual net volume change" is preferable to "growth" because it is based on actual plot to plot analysis of data. "Annual net volume change" in Table 6, is based on plot measurements that go back to the 1968 inventory. This provides a long term measurement window to average out the fluctuations caused by weather, insects, disease, and plot measurement differences. Also some plot measurement differences are attributed to change in basal area factor from the original inventory to the current and using different contractors for each inventory. "Annual net volume change" for sawtimber types, averaged 188 board feet per acre. The total "annual net volume change" on the Southwestern Idaho Supervisory Area, for all types, is 9.8 MMBF or 166 board feet per acre.

Table 6. Annual Net Volume Change Per Acre
Southwestern Idaho Supervisory Area

Timber Type	Net Volume Change (BD FT)	Acres by Timber Type	Total (MMBF)
Large Sawtimber (Timber Types 11 - 13)	215	14,200	3.0
Small Sawtimber (Timber Types 21 - 23)	177	36,841	6.5
Average Sawtimber (Timber Types 11 - 23)	188	51,041	9.6
Pole Size Sawtimber (Timber Types 31 - 33)	4	2,408	0.0
Sapling-Seedling Size (Timber Types 41 - 50)	33	5,167	0.2
All Timber Types	166	58,616	9.8

Using the same procedure and calculating "annual net volume change" since the 1996 inventory, the total "annual net volume change" on the Area for the last six years is 9.86 MMBF or 168 board feet per acre. The "annual net volume change" since the 1986 inventory is 9.92 MMBF, or 169 board feet per acre.